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EXAMINER

OYEBISI, OJO O

ART UNIT	PAPER NUMBER
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3628

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/588,030

Applicant(s)

CROOKSHANKS, REX J.

Examiner

OJO O. OYEBISI

Art Unit

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/02/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-7, 11-15, 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Casto (US PAT 6038547).

Re claim 1: Casto teaches: A computer hardware and software-implemented method of reducing errors and uncertainty in construction projects for practical application in the field of architecture and the technological arts of construction and computer operations for efficient administration of construction contract bidding, letting and management processes (i.e., provide a more efficient method and system for tracking the progress of a project; coordinate work requests to enable a reviewer to more efficiently analyze what work has been done in each area visited, see summary of the invention) involving construction project work information included in construction project plans and construction project contracts and/or subcontracts, said plans including a plurality of construction plan sheet drawings of a construction project, said computer including a central processor and a computer readable memory device, and said software includes

software code for controlling the operation said computer, comprising the following steps in any operative order (see summary of the invention):

(a) applying at least one electronic overlay from a computer memory to a digitized construction plan sheet as a representational surface corresponding to a selected construction trade or category of construction work to be performed on said project, said overlay being aligned with the plan sheet permitting defining by ordered sets of coordinates, a plurality of topological subdivision regions of said at least one construction plan sheet, each of said plurality of subdivision regions uniquely identifying, delineating and locating a selected portion of the construction work, object or element depicted graphically on said at least one plan sheet (col. 4, lines 1-20);

(b) linking each of said plurality of overlay-defined subdivision regions to at least one of said construction project contracts or sub-contracts to accurately map the plan sheet depiction that identifies the selection portion of the construction work to be bid, to the correct contracts or sub-contract(s) (see fig 1A and fig 1B); and

(c) incorporating said linked regions into said contracts to graphically reference the scope of work to be performed under said contract depiction on said plan sheets to enhance the precision , clarity and completeness of said work, thereby to reduce errors and omissions in construction performance under said contracts and/or sub-contracts(see fig 2).

Re claim 2: Casto further teaches a method as stated supra wherein said step of applying said overlay to define topological subdivision regions [defining step]

includes: (a) inputting said at least one plan sheet as digitized electronic data to a computer data processing system including [a] said central processor and computer-readable memory device (see col. 4, lines 10-20 and fig 4); (b) storing said input plan sheet data as a digital data file in said computer-readable memory device (see col.6, lines 25-50); (c) defining in said plan sheet data said at least one sub-division region containing a portion of the project work by selecting points corresponding to at least 2-dimentional overlay of essentially-orthogonal coordinates (see fig. 3, and col.3, lines 55-68)said selected points defining areas to which said defined portion of the project work is graphically represented (see col. 4, lines 10-30); and (d) storing said defined subdivision region as data in a table (i.e., database record format, see col. 5, lines 53-56) in said computer readable memory device (see col.6, lines 25-50).

Re claim 3: Casto further teaches a method as stated supra further including the steps of (a) providing a table in said computer-readable memory that includes a plurality of project subcontract work categories, each of said work categories corresponding to the work to be performed under one of said plurality of subcontracts (col. 4, lines 10-31); and (b) linking in said computer-readable memory said at least one sub-division region with a selected one of said work categories to create a data structure correlating said at least one subdivision region with said selected work category (col. 5 lines 37-65).

Re claim 4: Casto further teaches a method as stated supra further including the steps of (a) providing in said computer-readable memory at least one subcontract

document file; and (b) linking in said computer-readable memory said selected work category to said contract and/or subcontract document file(s) to create in said data structure a correlation between said selected work category and said subcontract document file, and a correlation between said at least one plan sheet subdivision region and said contract and/or subcontract document file(s) (col. 5 lines 37-65).

Re claim 6: Casto further teaches a method as stated supra further including the steps of:

- (a) associating an index reference with said at least one subdivision region and said at least one plan sheet (see col.6, lines 3-5);
- (b) printing said selected contract and/or subcontract document with said index reference included in said contract and/or subcontract document (see col. 5, lines 1-8); and
- (c) printing an image of said indexed subdivision region superimposed upon said plan sheet to reference, at least a portion of the work to be performed under said contract and/or subcontract by plan subdivision information being included in said plan sheet images (see col.5, lines 1-8).

Re claim 7: Casto further teaches a method as stated supra wherein said subdivision defining step is selected from at least one of the steps of:

- (a) defining at least one closed boundary box [curve] coordinated with said plan sheet, said subdivision region comprising the plan area enclosed by said boundary (see col. 6, lines 13-16);

(b) defining at least one trace path upon said at least one plan sheet, said trace path delimiting a trace area of said plan sheet lying within a predetermined distance from said path, said subdivision comprising said trace area (see col. 6, lines 13-16);

(c) defining least one center point upon said at least one plan sheet, said center point delimiting an area of said plan sheet lying within a predetermined geometric boundary shape coordinate with said center point, said subdivision region comprising the plan area enclosed by said predetermined boundary shape (see col.6, lines 13-16); and

(d) defining a reference grid coordinate with said plan sheet, said grid dividing said sheet into a plurality of predefined sub-areas, and selecting one or more contiguous ones of said plurality of sub-areas, said subdivision region comprising said selected contiguous sub-areas (see col.1, lines 21-23).

Re claim 11: Casto further teaches a method as stated supra wherein said plans and said contracts and subcontracts are accessibly and retrievably stored in electronic form in said computer readable memory device, and which includes the step of providing an Internet web-server configured for remote access of said plans, contracts and subcontracts for rendering and display via said web-server and for bi-directional flow of information related thereto including at least one of data, bids, comments, edits and changes (see col. 5., lines 36-41 and col. 6, lines 30-35).

Re claim 12: Casto further teaches a computer data processing system for electronically inter-linking selected sections of construction project plans to bidding contracts to reduce errors and uncertainty in construction projects by enhancing the precision, clarity and completeness of both said plans and said contracts, wherein the scope of work of said project is depicted in said plans, said plans comprising at least one sheet, and wherein said project work is bid by means of said bidding contracts, each of said bidding contracts including an agreement to perform specified portions of said project work, said data processing system comprising:

(a) a computer-readable memory means for storing at least one plan file including digital image information of said plan sheets, and for storing an overlay grid including essentially orthogonal coordinates (col. 5, lines 36-41);

(b) a computer display means connected to said memory means for displaying said plan sheet image (see fig. 4);

(c) a computer processing mean connected to said memory means for superimposing said overlay grid onto said plans to permit selection of coordinate information to define subdivision regions of said plains that uniquely bound and delineate selected portion of the project construction work depicted graphically on said plan sheet and for storing in said memory means said boundary defining information (see fig. 4, see col. 4, lines 10-20);

(d) a computer-operator interface means for selecting a closed boundary on said plan sheet image to define at least one subdivision region of said plan sheet

image, said subdivision region corresponding to a portion of the project construction work depicted in said plans (col. 5., lines 36-41); and
(e) linking means connected to said memory means for linking said stored plan image and said stored boundary information to at least one bidding contract, so as to define a portion of the project work to be performed under said contract (col. 5, lines 56-58).

Re claim 13: Casto further teaches a computer data processing system as stated supra which includes a computer program including code for causing said computer system to be accessible by at least one remote user via the internet (see col. 5, lines 29-35).

Re claim 14: Casto further teaches an application computer program product for use in reducing errors and uncertainty in construction project by the inter-linking of selected portions of construction project plans to relevant bidding contracts to enhance the precision, clarity and completeness of both said plans and said contracts, wherein:

- (i) the scope of work of said construction project is at least in part defined by said plans comprising at least one plan sheet (see col. 4, lines 10-20);
- (ii) said project is bid by means of said bidding contracts, each of said bidding contracts including an agreement to perform specified portions of the construction project work (see col. 4, lines 26-32); and

(iii) said computer program product is for controlling application operations of a computer system including processor means, memory means, display means and operator input means (see col. 6, lines 30-35);

said computer application, program product comprising a computer usable medium (col.5, lines 10-12) having computer readable program code means embodied in said medium (see col. 5, lines 30-35), said computer readable program code comprising:

(a) a first program code means for causing said computer system to read files stored in said memory means, said files including an image of at least one of said plan sheets and overlay grid to permit selection of coordinates information to define subdivision regions of said plans that uniquely bound and delineate selected portions of the project construction work depicted graphically on said plan sheets (col. 7, lines 59-62);

(b) a second program code means for causing said computer system to display said plan sheet image (see col. 7, line 15-17);

(c) a third program code means for causing said computer system to accept operator-selected inputs define as information a boundary around at least one subdivision region of said plan sheet image, said subdivision region orresponding to a portion of the project work depicted in said plans (see col. 7, lines 30-35);

(d) a fourth program code means for causing said computer system to store said boundary-defining information in said memory means (see col. 5, lines 15-20);

and

(e) a fifth program code means for causing said computer system to link said stored plan image and said stored boundary information to at least one bidding contract, so as to more precisely, clearly and completely define a portion of the project work to be performed under said contract (see col. 8, lines 52-56).

Re claim 15: Casto further teaches an application computer program product as stated supra wherein said product includes a sixth program code means for causing said computer system be accessible by at least one remote user via the Internet, said access of said remote user permitting said user to control the execution of at least one of said first through fifth program code means (see col. 6, lines 30-40).

Re claims 21 and 22: Casto further discloses a method as stated supra wherein said mapping of said overlay substantially orthogonal coordinates to said plans is provided by a system of almost-orthogonal equations (see fig. 3) having the property of progressively increasing transparency as the size of the subdivision cells is reduced (i.e., uniform or non-uniform groupings regions, see col.4, lines 1-10).

Re claim 23: Casto further discloses a method as stated supra which includes the step of verifying completeness of mapping of the construction work, objects or elements by said computer processor executing code for at least one error detection algorithm that topologically proves completeness or non-duplication of topological subdivisions, by at least one of a) comparing coordinates of subdivision region boundaries on each plan page to determine if there are any

that are not contiguous with or overlap other regions (see col.1, lines 21-23), or
b) summing the total area of all subdivision regions on a plan sheet and
comparing that sum to the area in which work is depicted on said plan sheet to
determine if there are less than all elements of the plan sheet that have been
mapped (see col.6, lines 13-16).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Casto as applied to claim 1 above in view of Wang et al (Wang hereinafter: US PAT 5,129,061).

Re claim 5: Casto further teaches a method as stated supra wherein said computer system includes a display device and a graphical user interface system, further including the steps of:

(b) displaying an image of said selected contract and/or subcontract document on said [a] display device connected to said computer system (see col. 6, lines 35-51);

(d) retrieving from said data structure an image of said subdivision region of said plan sheet in response to a selection of said icon using said graphical user interface

e r f a c e to graphically display said portion of the work to be performed under said contract and/or subcontract (col. 6, lines 35-51).

Casto fails to disclose:

(c) displaying said selected icon as an image superimposed upon said contract and/or subcontract image.

Wang provides such a teaching (see col. 18, lines 58-68).

Neither Casto nor Wang disclose: (a) a step of associating in computer readable memory a selected icon file with said at least one subdivision region and said at least one plan sheet. However it is well known to one having ordinary skill in the art at the time of invention was made that most of the files on a computer readable memory have an icon which is associated with a document.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Casto and Wang to facilitate image of file storage and for retrieval purpose.

8. **Claims 16-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Casto in view of PR Newswire (PNC Bank Launches Internet-Based Appraisal Ordering System For Commercial Real Estate Mortgages, New York: May 24, 1999 Pg 2), and further in view of Bezos et al. (Bezos hereinafter: US PAT 6,029,141).

Re claim 16: Casto discloses: An electronic business method for construction contract bid and construction management control comprising;

a) means for providing services selected from at least one of construction design, inter-linking of specific construction project plan images to related contracts and/or subcontracts for bidding on said contracts, builder and construction project control, and links to affiliates (see col 6, lines 30-36) ;

b) means for providing said services to user-subscribers, including inputting by a web-site operator, of specific information in response to user requests and information and communications to users (see col 6, lines 30-36);and

c) providing and configuring a computer data processing system for said interlinking operation (see col 4, lines 30-36, see col 6, lines 30-36).

Casto does not disclose a website.

However, PR Newswire discloses the website with the bidding information along with the details. Thus it would be obvious to one having ordinary skill in the art at the time of invention was made to modify the system of Casto by adapting the teaching of PR Newswire to further simplify customer interface and for providing access from most remote locations.

Re claim 17: Bezos discloses: An electronic business method wherein; (a) said links to affiliate include hyperlinks that provide services on a referral or commission fee basis, said affiliate including at least one of owner, developer, architects, contractors, engineers, Surveyors, subcontractors, lenders, insurers, accounting service providers, legal service providers, and title services (see abstract). Thus it would be obvious to one having ordinary skill in the art at the

time of invention was made to modify the system of Casto by adapting the teaching of Bezos to get more clients.

Re claim 18: Casto discloses: An electronic business method wherein;
(a) said operator interactively provides said inter linking services to at least one user subscriber selected from owners, developers, architects, contractors, and subcontractors (see Casto, col 6, lines 30-32). Casto does not disclose a website. However, PR Newswire discloses the website with the bidding information along with the details. Thus it would be obvious to one having ordinary skill in the art at the time of invention was made to modify the system of Casto by adapting the teaching of PR Newswire to further simplify customer interface and for providing access from most remote locations.

Re claim 19: PR Newswire discloses: An electronic business method wherein; a said website includes an operator-managed secure project page accessible through said website for interactive display and rendering of linked plans and contracts, and exchange e-mail information related to the project plan, bidding and construction phases of a particular project. Thus it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the system of Casto by adapting the teaching of PR Newswire to further simplify customer interface.

Re Claim 20: Casto further discloses an electronic business method as discussed supra wherein interaction between and among users and said operator is browser enabled (see col. 6, lines 30-40) but not e-mail enabled.

PR Newswire discloses: the interaction between users and operator is the browser and e-mail enabled. Thus it would be obvious to one having ordinary skill in the art at the time of invention was made to modify the system of Casto by adapting the teaching of PR Newswire to further simplify customer interface.

Response to Arguments

Applicant's arguments filed May 2, 2005 have been fully considered but they are not persuasive.

- In response to the applicant's argument regarding the rejection of claims 1-4, 6-7, 11-15, and 21-23 under 35 U.S.C. 102 (e). In the applicant's remark, the applicant states "the disclosure of Casto does not, either in Casto's disclosure of his/her inventive subject or in Casto's discussion of prior art, in any way references the topological subdivision of construction plans in any manner for any purpose. Nor is there any reference to electronic overlays, orthogonal coordinates, the use of subdivision regions or cells." It is clear to the examiner that the applicant, deliberately or perhaps inadvertently, ignores the relevance of Casto's teachings to the claimed invention. In col. 3, lines 55-68, Casto disclosed a construction project to be tracked, the said project is partition into three different sections, each section has a number of level, and each level of each section can be broken down into regions, fig. 3 is a schematic illustration of this project. In addition, Casto further discloses in fig. 3 the splitting of each level of each section into one or more regions – section A can create

four regions, section B can create one region, and section C can create nine regions(see col. 4, lines 1-10). Thus, the argument that the applicant has shown five different methods of use of overlays to create subdivision regions, and that Casto region is not a topological subdivision created electronically on plain sheet drawing is baseless. The applicant should pay close attention to Casto's disclosure, and in light of this, the applicant would realize that Casto anticipates all the aforementioned limitations. Furthermore, Casto discloses that it is the object of his/her invention to provide a more efficient method and computer-based tracking system for tracking the progress of a project (see summary of invention). In light of the disclosure above, to say that Casto is silent on teachings related to a system that reduce errors, omissions and uncertainty in the bidding process for construction project is baseless.

- In response to the applicant's argument regarding the rejection of claims 5, 16-20 under 35 U.S.C. 103. The applicant states "PNCBank is a press release, directed to what the system will do, and is clearly not a teaching of how to accomplish the alleged functionality." This statement might be true if PNCBank is the sole reference used for the rejection of the claimed invention. Contrary to the applicant's assertion, Casto and Bezos compensate for the incomplete teachings of PNCBank, and when used in combination, the limitations of the claimed invention are completely anticipated.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

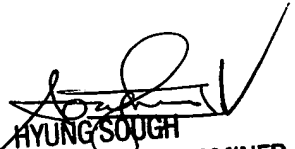
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OJO O. OYEBISI whose telephone number is (571) 272-8298. The examiner can normally be reached on 8:30A.M-5:30P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HYUNG S. SOUGH can be reached on (571)272-6799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3628

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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